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EXAMINER

KITOV, ZEEV

ART UNIT PAPER NUMBER

2836

DATE MAILED: 04/23/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application N .

10/029,593

Applicant(s)

OCHI, SAM SEIICHIRO

Examiner

Zeev Kitov

Art Unit

2836

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 December 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1 -41 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 - 41 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 December 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

In a telephone conversation with an Attorney for Applicant, Mr. George Yee, on April 6 2003 a request for Restriction was made based upon Examiner's determination that an Application includes two patentably distinctive inventions, one for Over-Current and Disconnection Protection Circuit including Claims 4, 11 – 18, 22 – 30, 32 – 34 and 36 – 40 and another one for Filtering Circuit including Claims 1 – 3, 5 –10, 19 – 21, 31, 35, 39 and 41.

In a conversation with Applicant's Attorney, Mr. George Yee, a provisional election was made with traverse to prosecute the invention of Protection circuit, including claims 4, 11 – 18, 22 – 30, 32 – 34 and 36 - 40.

However, in a course of examination more careful analysis of the claims reveals that all the claims present the same invention. Therefore, they were examined altogether.

### ***Objection***

1. Claim 32 is objected to due to following problems:

(A) On page 17, line 4 "the first circuit" is recited. It is not clear, either this recitation stands for previously introduced "first circuit means" and then should be changed to "the first circuit means", or the recited first circuit is a new element lacking antecedent basis, which should be changed to "a first circuit". The same objection is

Art Unit: 2836

applicable to a recited in line 4, "the power source". For purpose of examination they were interpreted as "a first circuit" and "a power source".

(B) "The electronic device" recited in line 6, is lacking the antecedent basis and should be changed to "an electronic device".

(C) The same objections are applicable to Claim 37, page 17, line 3 and page 18, line 6 repeating the same citations.

(D) The same objections are applicable to Claim 40, page 18, line 3 and page 18, line 5 repeating the same citations.

Appropriate corrections are required.

Claim 3 is objected to under 37 CFR 1.75 as being a substantial duplicate of Claim 2. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k). As a matter of fact, Claim 3 is an exact copy of Claim 2.

### ***Drawings***

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, following elements of Claim 14, the detector and the switch coupled to the positive terminal of the source of

power (emphasis added) must be shown or the feature(s) canceled from the claim(s).

No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### ***Claim Rejections - 35 USC § 112***

3. Claim 31 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. According to a claim language, "the second circuit means further being responsive to the control signal so that the amount of power that is applied to the device varies in response to the electrical noise" (emphasis added). If it is true, the device is supplied with noisy power signal, which cannot be a goal of invention. For purpose of examination it was interpreted as "that the amount of power that is applied to the device remains independent of noise".

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 4, 11 - 14, 16, 17, 19 - 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Goerke et al. (US 5,698,973). Regarding Claim 11, Goerke et al. disclose all the elements of the claim including a switch coupling a target circuit with a source of power (element 10 in Fig. 4), a first detector coupled to the switch, which causes closing of the switch and detecting application of power to the circuit (element 20 in Fig. 4), a second detector (element 110 in Fig. 4), which causes opening of the switch and detects when a supply current exceeds a threshold (col.5, lines 51-67, col. 6, lines 1 – 52, col. 6, lines 66 – 67, col.7, lines 1 – 52).

Regarding Claim 12, Goerke et al. disclose the circuit, wherein the switch closes at a slower rate than it opens (col. 8, lines 18 – 42).

Regarding Claim 13, Goerke et al. disclose the circuit, wherein the switch has a variable conductance and at the time of closing at a slow rate its conductance gradually increases (see Abstract, col. 2, lines 59 – 62). Gradual increase in the switch transconductance is inherent property of the MOSFET transistor passing from cut-off regime to close circuit conditions.

Regarding Claim 14, Goerke et al. disclose the first detector and the switch (elements 20 and 10 in Fig. 4) as being coupled to the positive terminal of the power source.

Regarding Claim 16, Goerke et al. disclose a first transistor (element 10 in Fig. 4) having a control node coupled to the first detector (element 20 in Fig. 4); the first transistor is coupled between the power source and the target circuit.

Regarding Claim 17, Goerke et al. disclose the first transistor as a FET transistor (element 10 in Fig. 4).

Regarding Claim 19, Goerke et al. disclose the second detector (element 110 in Fig. 4), which is represented by an op-amp coupled between the first detector and the switch (through diode 200 in Fig.4).

Regarding Claim 20, Goerke et al. disclose the second detector having resistors coupled between op-amp inputs (elements 170b and 180b in Fig. 4).

Regarding Claim 21, Goerke et al. disclose a second power source (element 190 in Fig. 4) coupled between one of the op-amp inputs and the source of power (ground terminal)

Regarding Claim 4, Goerke et al. disclose detecting power from a source of power; coupling the power to the target circuit in a gradual manner; detecting when a current supplied to the target circuit exceeds a threshold; and decoupling the power in response to detecting that the current supplied to the target circuit exceeds a threshold (col.5, lines 51-67, col. 6, lines 1 – 52, col. 6, lines 66 – 67, col.7, lines 1 – 52).

Claims 1 – 3 are rejected under 35 U.S.C. 102<sup>b</sup>() as being anticipated by Johansson (US 5,587,685), which discloses all the elements of Claim 1, including detecting power from a source of power (by elements R3, R4 in Fig. 2), coupling the power to the target circuit in a gradual manner (by element Q2 in Fig.2), detecting noise components in the power (by elements R3 and C2 in Fig. 2), and varying the amount of

Art Unit: 2836

power delivered to the target circuit in response to the noise component (by element Q2 in Fig. 2, col. 4, lines 43 –67, col. 5, lines 1 – 62).

Regarding Claims 2 and 3, Johansson discloses a coupling that includes controlling the conductivity of a transistor device (element Q2 in Fig.2), the transistor device having series-connection between the source of power and the target circuit.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 15, 18, 22 - 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Goerke et al. in a view of Rasums et al. (US 5,572,395). As was stated above, Goerke et al. disclose all the elements of Claims 11 and 16. However, regarding Claim 18, even though they disclose a filter (elements 90 and 70 in Fig. 4), they do not disclose the control node of the first transistor coupled to the first detector via filter. Rasums et al. disclose a hot-plugging circuit, having most of the elements of the claimed circuit including a filter (elements R13, R14 and C3 in Fig. 2) with the control node of the first transistor (element Q10 in Fig. 2) coupled to the first detector (element 105 in Fig. 2) via the filter. Both patents have the same problem solving area, namely providing efficient hot-plugging solution. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used filter



connection according to Rasums et al. in the circuit of Goerke et al., because as well known in the art, a specific placement of a low-pass filter either at the input of the comparator (according to Goerke et al.), or at the output, i.e. between the comparator and the first transistor (according to Rasums et al.), it does not change the circuit characteristics, neither time constant, no threshold value. A selection of particular solution is up to designer according to his secondary considerations.

Regarding Claim 15, Rasums et al. discloses the first detector (element 105 in Fig. 2) and the switch (element Q10 in Fig. 2) as being coupled to the negative terminal of the power source (line OUT 2 in Fig. 2).

Regarding Claim 22, Rasums et al. disclose the first detector (elements 105, R13 and Q9 in Fig. 2), which includes a second transistor (element Q9 in Fig. 2) and a capacitor between the conduction nodes of the second transistor (element C3 in Fig. 2).

Regarding Claims 23 and 27, Goerke et al. disclose the circuit having a switch (element 10 in Fig. 4), a first detector coupled to the switch and detecting a power from the source (element 20 in Fig. 4), and a second detector for detection of the power source being decoupled from the target circuit (in terms of Claim 27, detecting a voltage change a from non-zero voltage toward a zero voltage) causing an opening of the switch (col. 8, lines 18- 42).

Regarding Claims 24 and 28, Goerke et al. disclose a first transistor coupled between the source of power and the target circuit (element 10 in Fig. 4) and being controlled by the first detector (element 20 in Fig.4).

Regarding Claims 25 and 29, Rasums et al. disclose a filter (elements R13, R14 and C3 in Fig. 2) with the control node of the first transistor (element Q10 in Fig. 2) coupled to the first detector (element 105 in Fig. 2) via the filter.

Regarding Claims 26 and 30, Goerke et al. disclose the second detector (element 110 in Fig. 4), which is represented by an op-amp coupled between the first detector and the switch (through diode 200 in Fig.4).

6. Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Goerker et al. in a view of Johansson (US 5,587,685). Goerke et al. disclose some of the elements of Claim 5, including a switch coupling a target circuit with a source of power (element 10 in Fig.4), a first detector configured to detect power provided by the source of power (element 20 in Fig. 4), the first detector operatively coupled with the switch, wherein the switch closes responsive to the first detector. However, it does not disclose a second detector configured detecting noise in the power and coupled to the switch, wherein a conductivity of the switch varies responsive to the second detector. Johansson discloses a second detector configured detecting noise (element in the power and coupled to the switch, wherein a conductivity of the switch varies responsive to the second detector detecting noise components in the power (by elements R3 and C2 in Fig. 2), and varying the amount of power delivered to the target circuit in response to the noise component (by element Q2 in Fig. 2, col. 4, lines 43 –67, col. 5, lines 1 – 62). Both patents have the same problem solving area, namely providing efficient means for hot plugging of electronic boards. Therefore it would have been obvious to

one of ordinary skill in the art at the time the invention was made to have added the Johansson noise detecting and compensating solution into Goerke et al., because as Johansson states (col. 2, lines 4 –31) power supplies transients might be dangerous for electronic equipment.

Regarding Claim 6, Johansson discloses the second detector as being coupled between the source of power source and a gate of the switch (elements R3 and C2 in Fig. 2).

7. Claims 32 - 34 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rasums et al. (US 5,272,395). Regarding Claim 32, Rasums et al. disclose following elements of the claim including first circuit means for detecting a connection event wherein a connection is made between the first circuit and the power source (element 105 in Fig. 2) detecting application of power (ENABLE signal of Fig. 2 is shown in Fig. 1 as being supply voltage  $V_{bulk}$  potential); second circuit means, responsive to the first circuit means (element Q10 in Fig. 2), for coupling power from the power source to the electronic device so that power is applied to the electronic device in a gradual manner (filter R13, C3 smoothes the ramp); third circuit means for detecting an overcurrent event wherein the electronic device draws current from the power source exceeding a predetermined level of current (elements R16 in Fig. 1 and 2) and fourth circuit means for reducing the amount of power that is applied to the electronic device in response to the third means (element Q9 in Fig. 1, elements 20, R14 and Q10 in Fig. 2).

However, the claim is presented in a means and function form. According to 35 U.S.C. 112, 6<sup>th</sup> paragraph, "An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof" (emphasis added). The means or step plus function limitation should be interpreted in a manner consistent with the specification disclosure.

To satisfy conditions of equivalency, the prior art must perform the identical function specified in the claim. "The prior art element performs the identical function specified in the claim in substantially the same way, and produces substantially the same results as the corresponding element disclosed in specification". (*Kemco Sales, Inc. v. Control Papers Co.*, 208 F.3d 1352, 54 USPQ2d 1308 (FED. Cir. 2000)).

The reference elements differ from Claims 32, 34 and 36 in following:

First circuit means for detection of the power source application, which applicant discloses as comparator and the reference teaches as a current source provided with an input zener diode (element 105 in Fig. 4). The circuit of the reference is connected between to the power source, detects an application of the power source and controls the second circuit means, thus functioning in accordance to the Specification.

Fourth circuit means for reducing the amount of power applied to the device in response to the third circuit means is disclosed in the application as combination of comparator and transistor, while the reference teaches an SCR (element 20 in Fig. 2) and resistors (elements R13 and R14). Since the SCR has specific threshold, it is

equivalent to the comparator. Therefore, both exceptional elements have the same functionality, thus satisfying conditions of equivalency.

Regarding Claim 33, Rasums et al. disclose a fifth circuit means producing a signal indicative of an occurrence of the overcurrent event (signal propagating across resistors R13 and R14).

Regarding Claim 34, Rasums et al. disclose the third circuit means monitoring electrical activity on only one of the first and second connection terminals (resistor R16 monitors the current on only one connection terminal (see Fig. 1).

Regarding Claim 36, Rasums et al. disclose the fourth circuit means as being effective in decoupling the power supply from electronic device (element Q9 in Fig. 1, elements 20, R14 and Q10 in Fig. 2).

8. Claims 37 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Goerke et al.

Regarding Claim 37, Goerke et al. discloses following elements of the claim including first means detecting a connection event between a first circuit and a first detection means detecting connection between a first circuit and a power source (element 20 in Fig. 4), a second circuit means coupling the power source to a device, being controlled by the first circuit means and varying the amount of power applied to the device (element 10 in Fig. 4), a third circuit means detecting a change in an electrical parameter of the second circuit means indicating a disconnection between the circuit and the power source (elements 150, 240, 170a, 180a, 170b, 180b and 190 in

Fig. 4 detecting a source voltage of a transistor indicating a disconnection between the circuit and the source of power), forth circuit means decoupling the power source from the device (elements 110, 200 and 10 in Fig. 4). The claim is presented in a means and function form. However, all recited elements of the reference have the same functionality as the claim elements disclosed in Specification. Therefore, as was stated above, the rules of equivalency are satisfied.

Regarding Claim 38, Goerke et al. discloses fifth circuit means detecting a change in an electrical parameter of the second circuit means indicative of a disconnection between the circuit and the power source (elements 150, 240, 170a, 180a, 170b, 180b and 190 in Fig. 4 detecting a source voltage of a transistor indicating a disconnection between the circuit and the source of power). A signal indicative of disconnection appears at the output of comparator (element 110 in Fig. 4). The claim is presented in a means and function form. However, all recited elements of the reference have the same functionality as the claim elements disclosed in Specification. Therefore, as was stated above, the rules of equivalency are satisfied.

9. Claim 40 is rejected under 35 U.S.C. 103(a) as being unpatentable over Goerke et al.

Goerke et al. discloses following elements of the claim including first means detecting a connection event between a first circuit and a first detection means detecting connection between a first circuit and a power source (element 20 in Fig. 4), a second circuit means coupling the power source to a device, being controlled by the first

Art Unit: 2836

circuit means and varying the amount of power applied to the device (element 10 in Fig. 4), a third circuit means detecting an excessive current draw exceeding a predetermined threshold (elements 170a, 180a, 170b, 180b and 110 in Fig. 4), fourth circuit means decoupling the power source from the device (elements 200 and 10 in Fig. 4), fifth circuit means detecting a change in an electrical parameter of the second circuit means indicative of a disconnection between the circuit and the power source (elements 150, 240, 170a, 180a, 170b, 180b and 190 in Fig. 4 detecting a source voltage of a transistor indicating a disconnection between the circuit and the source of power), and a sixth circuit means for decoupling the power source from the device in response to the fifth means (elements 110, 200 and 10 in Fig. 4). The claim is presented in a means and function form. However, all recited elements of the reference have the same functionality as the claim elements disclosed in Specification. Therefore, as was stated above, the rules of equivalency are satisfied.

10. Claims 31, 39 and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Goerke et al. in a view of Latham et al. (US 5,760,571) and further in a view of a textbook of R. Boylestad and L. Nashelsky, Electronic Devices and Circuit Theory.

Regarding Claim 31, Goerke et al. discloses first circuit means for detecting a connection event between the first circuit and the power source (element 20 in Fig. 4), second circuit means, responsive to the first circuit means varying the amount of power that is applied from the power source to the device (element 10 in Fig. 4). However they do not disclose third circuit means filtering electrical noise originating from the power

source and fourth circuit means producing a control signal responsive to the filtered signal. Neither they disclose the second circuit means as being responsive to the control signal so that the amount of power that is applied to the device remains independent of noise.

Latham et al. disclose the third circuit means filtering electrical noise originating from the power source (elements 42, 44 and 48 in Fig. 2 and 3, col. 4, lines 51 – 67, col. 5, lines 1 – 31) and fourth circuit means producing a control signal responsive to the filtered signal (element 50 in Fig. 2 and 3). As per the second circuit means being responsive to the control signal, a textbook of R. Boylestad and L. Nashelsky discloses that series (Fig. 16.28) and parallel (shunt) (Fig. 16.29) voltage regulators are essentially equivalent and can be used interchangeably with proper reverse of a phase of the control signal. Therefore, the shunt power control element of Latham et al. can be replaced by the series power control element (such as element 10 in Fig. 4 of Goerke et al.). Both patents have the same problem solving area, namely providing efficient hot swapping solutions for electronic circuits. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used the Latham et al. solution for damping the power supply line in the circuit of Goerke et al., because as Latham et al. state (col. 1, lines 41 – 60), possible parasitic oscillations in the electronic circuits present substantial problem of power supply instability and therefore, should be resolved.

Even though Claim 31 is presented in means and function form, the presented prior art references disclose all the elements of the claim in a view of Specification.



Regarding Claim 39, Latham et al. disclose the fifth circuit means detecting electrical noise from the power source (elements 42, 44 and 48 in Fig. 2 and 3, col. 4, lines 51 – 67, col. 5, lines 1 – 31). As per the second circuit means being responsive to the control signal by varying the amount of power applied to the device, a textbook of R. Boylestad and L. Nashelsky discloses that series (Fig. 16.28) and parallel (shunt) (Fig. 16.29) voltage regulators are essentially equivalent and can be used interchangeably with proper reverse of a phase of the control signal.

Regarding Claim 41, Latham et al. disclose the seventh circuit means detecting electrical noise from the power source (elements 42, 44 and 48 in Fig. 2 and 3, col. 4, lines 51 – 67, col. 5, lines 1 – 31). As per the second circuit means being responsive to the control signal by varying the amount of power applied to the device, a textbook of R. Boylestad and L. Nashelsky discloses that series (Fig. 16.28) and parallel (shunt) (Fig. 16.29) voltage regulators are essentially equivalent and can be used interchangeably with proper reverse of a phase of the control signal.

11. Claim 35 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rasums et al. in a view of Latham et al. (US 5,760,571) and further in a view of a textbook of R. Boylestad and L. Nashelsky, *Electronic Devices and Circuit Theory*. As was stated above, Rasums et al. disclose all the elements of Claim 32. However, regarding Claim 35, they do not disclose fifth circuit means detecting electrical noise in the power. Neither they disclose the second circuit means as being responsive to the control signal by varying the amount of power that is applied to the electronic device.

Latham et al. disclose the fifth circuit means detecting electrical noise from the power source (elements 42, 44 and 48 in Fig. 2 and 3, col. 4, lines 51 – 67, col. 5, lines 1 – 31). As per the second circuit means being responsive to the control signal, a textbook of R. Boylestad and L. Nashelsky discloses that series (Fig. 16.28) and parallel (shunt) (Fig. 16.29) voltage regulators are essentially equivalent and can be used interchangeably with proper reverse of a phase of the control signal. Therefore, the shunt power control element of Latham et al. can be replaced by the series power control element (such as element 10 in Fig. 4 of Goerke et al.). Both patents have the same problem solving area, namely providing efficient hot swapping solutions for electronic circuits. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used the Latham et al. solution for damping the power supply line in the circuit of Goerke et al., because as Latham et al. state (col. 1, lines 41 – 60), possible parasitic oscillations in the electronic circuits present substantial problem of power supply instability and therefore, should be resolved.

### ***Conclusion***

The prior art made of record not relied upon is considered pertinent to applicant's disclosure: US 5,155,648, US 5,990,723, US 5,892,381, US 5,619,127, US 6,127,882.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Zeev Kitov whose telephone number is (703) 305-0759. The examiner can normally be reached on 8:00 – 4:30. If attempts to reach examiner by

Art Unit: 2836

telephone are unsuccessful, the examiner's supervisor, Brian Sircus can be reached on (703) 308-3119. The fax phone numbers for organization where this application or proceedings is assigned are (703) 308-7722 for regular communications and (703) 308-7724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Z.K.  
04/20/2003



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